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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,335

12/23/2005

Makoto Ikeda

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CARRIER BLACKMAN AND ASSOCIATES

24101 NOVI ROAD

SUITE 100

NOVI, MI 48375

EXAMINER

GRAMLING, SEAN P

ART UNIT

PAPER NUMBER

2875

NOTIFICATION DATE

DELIVERY MODE

03/31/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/562,335	Applicant(s) IKEDA ET AL.	
	Examiner SEAN P. GRAMLING	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

Acknowledgment is made of Amendment received January 7, 2008. Claims 1, 3-4 and 6-12 are amended. Claims 13-20 are added. Claims 1-20 are pending.

Claim Objections

Claims 1 and 5-6 are objected to because of the following informalities:

Regarding claim 1, lines 3-4, Examiner believes “from” should read “to”. Additionally, it is unclear to Examiner what Applicant means “extending longitudinally of the guide”. The same comments apply to independent claims 5 and 6. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 5-7, 9, 11 and 13-20** are rejected under 35 U.S.C. 102 (b) as being anticipated by *Fujimoto et al* (US 6,259,082).

3. Regarding claim 1, Fujimoto discloses a light guide 10 having an end face 10B at a longitudinal end, a light-emitting face 10A and two internal side faces 10C and 10D

which emits lights incident on the end face to the light-emitting face while the lights are reflected by the internal side faces wherein sectional shapes of the two internal side faces are oval arc curves or paraboloid curves and a concentrating position of lights reflected by one side face and a concentrating position of lights reflected by the other side face are different from each other and wherein the curved surfaces of the oval arc curves or paraboloid curves have differently shapes areas such that light emitted after being reflected by the two curved surfaces concentrate at different distances from the curved surfaces (see Figure 31 and column 13, lines 29-64).

4. Regarding claim 2, the light guide 10 is integrally formed as a unitary member (see Figure 31).

5. Regarding claim 3, the light guide includes two substantially half pieces connected together, and oval arcs or paraboloids which constitute reflective faces are formed on the substantially half pieces (see Figure 31 and column 13, lines 29-64).

6. Regarding claim 5, Fujimoto discloses a light guide 10 having an end face 10B, an emitting face 10A and two internal side faces 10C and 10D which emits lights incident on the end face to the emitting face while the lights are reflected by the internal side faces wherein sectional shapes of both of the two internal side faces are oval arc curves and a difference in focal distance between the oval arc causes concentrating positions of the reflected lights to be different (see Figure 31 and column 13, lines 29-64).

7. Regarding claim 6, Fujimoto discloses a light guide 10 having an end face 10B at a longitudinal end, a light-emitting face 10A and two internal side faces 10C and 10D

Art Unit: 2875

which emits lights incident on the end face to the light-emitting face while the lights are reflected by the internal side faces wherein sectional shapes of the two internal side faces are oval arc curves and concentrating positions of reflected lights differ from one oval arc curve to the other, and wherein the curved surfaces of the oval arc curves have have differently shapes areas such that light emitted after being reflected by the two curved surfaces concentrate at different distances from the curved surfaces (see Figure 31 and column 13, lines 29-64).

8. Regarding claim 7, Fujimoto discloses an image reader comprising an illuminating unit comprising the light guide according to claim 1, a light source 2 provided at an end face at a longitudinal end of the light guide, and a lens array 51 for converging on a light receiving element lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 4 housing the illuminating unit the lens array and the light receiving element (see Figures 4-7).

9. Regarding claim 9, Fujimoto discloses an image reader comprising an illuminating unit comprising the light guide according to claim 5, a light source 2 provided at an end face at a longitudinal end of the light guide and a lens array 51 for converging on a light receiving element lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 4 housing the illuminating unit, the lens array and the light receiving element (see Figures 4-7).

10. Regarding claim 11, Fujimoto discloses an image reader comprising an illuminating unit comprising the light guide according to claim 5, a light source 2 provided at an end face at a longitudinal end of the light guide and a lens array 51 for converging on a light receiving element lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document and a box 4 housing the illuminating unit, the lens array and the light receiving element (see Figures 4-7).

11. Regarding claims 13-15, the light guide 10 is shaped such that light is emitted in a line shape through the light-emitting face 10A (see Figure 4).

12. Regarding claims 16-18, the light guide further comprises a light scattering part 14 formed on the bottom face 10B (see Figure 4).

13. Regarding claims 19-20, the light guide further comprises a bottom face 10B opposite the light-emitting face 10A and the light-emitting face includes portions disposed at different distances from the bottom face (see Figure 31).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 4, 8, 10 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Fujimoto* as applied to claims 1, 7, 9 and 11 above, and further in view of *Ikeda* (US 2001/0035986).

16. Regarding claim 4, *Fujimoto* does not disclose a light scattering part formed in connecting faces of the half pieces. However, *Makoto* discloses a light scattering part 41 b formed in connecting face of half pieces of a light guide 41 (see *Makoto*, Figure 6b and paragraph [0090]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a light scattering piece between the half pieces of the light guide 10 in *Fujimoto* as taught by *Makoto* in order to uniformly scatter light towards the emitting face 10A of the light guide 10.

17. Regarding claims 8, 10, and 12, *Fujimoto* does not disclose a second illuminating unit arranged to cause lights emitted from the light-emitting faces of the light guides to irradiate the same area of an illuminated face of the document. However, *Makoto* discloses two illuminating units 3(L) and 3(R) arranged to cause lights emitted from the light-emitting faces of the light guides to irradiate the same area of an illuminated face of the document (see *Makoto*, Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a second illuminating unit in the image reader of *Fujimoto* as taught by *Makoto* in order to provide a uniform distribution of light intensity in the scanning direction, to equalize distribution of light intensity and to increase the quantity of light (see *Makoto*, paragraph [0028]).

Response to Arguments

18. Applicant's arguments, filed January 7, 2008, with respect to the rejection of the claims in the previous Office Action have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of *Fujimoto et al* (US 6,259,082).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. GRAMLING whose telephone number is (571)272-9082. The examiner can normally be reached on MONDAY-FRIDAY 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2875

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sean P Gramling
Examiner
Art Unit 2875

SPG

/Sandra L. O'Shea/
Supervisory Patent Examiner, Art Unit 2875